Vadim Korolik

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Education

Aug 2015 – May 2019 (*Expected*)
GPA: 3.75/4.0

University of Southern California, Los Angeles, CA
B.S. Computer Engineering and Computer Science, Viterbi School of Engineering
B.S. Physics, Dornsife College of Letter of Science and Art
Relevant Courses: Intro. To Computer Programming, Intro. To Embedded Systems, Calculus III, Data Structures and Object Oriented Design, Discrete Methods in Computer Science, Fundamentals of Physics I: Mechanics and Thermodynamics, Mathematics of Physics and Engineering I

Awards

Trustee Full-Tuition Scholar, W.V.T. Rusch Undergraduate Engineering Honors,
USC Viterbi School of Engineering Undergraduate Research Fellow

Work Experience

Oct 2015 – Present

Undergraduate Research Fellow – Interaction Robotics Lab (Led by Professor M. Mataric)**, USC**

- Conducted research for a grant from National Robotics Initiative in socially aware and expressive mobile remote presence robotics by developing code infrastructure for facial action unit tracking.
- Worked with Microsoft Kinect and open-source CLM face tracking APIs for processing facial and posture data to extract emotions and behaviors from users with machine-learning techniques.

June – Aug. 2015

Software Development Intern – CloudFlow, San Jose, CA

- Company clients desired extended control over the virtualization software produced by CloudFlow for automation with utilities such as Vagrant, Chef, or Puppet.
- Worked on expanding the existing graphical virtual-data-center management interface and CLI into a HTTP web-based Python API that allows users to automate virtual environment setup through scripting languages. This improved the existing product for use in automated IT environments.
- Tested and debugged network virtualization software at the core of the virtual-data-center product.

Extracurricular Activities

Aug '15 – Present

Software Developer – USC Aerial Robotics (Autonomous Drones) Team

- Contributed to the low-level software division of the USCAR Team on autonomous positional maneuvering using optical flow-tracking.
- Programmed in a C/C++ hybrid using the PX4 flight-control platform.
- Experience with threads and PID control systems as well as the PX4 message data-communication model.

Aug '09 – May '15

Lead of Software Department - FRC Robotics Team, Archbishop Mitty High School

- Key stakeholder in defining robot build strategy and theory of operations, software and electronics design.
- Managed programming team members, taught design concepts to new members, and insured close collaborations with other divisions.
- Developed modular code in Java for PID control of drive and environment manipulation systems.
- Served as the Robot Driver in all competitions responsible for operating the robot and presenting the work of the team during robot matches.

Nov '09 – May '15

Participant - Synopsys Silicon Valley Science and Technology Championship

- Competed in annual independent research projects as part of the Synopsys Silicon Valley Science Championship, focused on investigation of Chemistry and Physics phenomena.
- Won 1st place on county regional level in 6th, 8th, and 11th grades.
- Won 3rd place on California State Championship in 8th grade with a project in Physics on light refraction, resulting in a research paper submitted to the Advanced Semiconductor Manufacturing conference in 2015.

July – Aug. 2014

Stanford Pre-Collegiate Summer Institutes - Artificial Intelligence Program, Stanford, CA

- Applied previous knowledge of Java to artificial intelligence and machine learning algorithms.
- Designed a complete, intelligent chess game AI using heuristic analysis and filtering algorithms.

Volunteer Service and Leadership

Sep '12 – Dec '13

Robotics Mentor - Old Orchard School, San Jose, CA

- Worked with 20 elementary school children to prepare them for a LEGO Robotics competition.
- Taught individually and in-group environment to explain programming concepts.
- Organized students' fundraising projects for Boy and Girls club of Silicon Valley where we raised over $1,000 to buy multiple LEGO Mindstorms kits for the club.

Skills

Programming: C/C++, Python, Java, PHP, MySQL, JavaScript, HTML5, CSS, LabView
Hardware: Arduino Uno (C and Java), Intel Galileo (C++), CAN bus motor controllers
Operating System: Windows and Linux environments (LAMP, NGINX, Python HTTP servers), Robot Operating System (ROS)
Personal Project Website: http://www.vadweb.us
Languages: English (Native), Russian (Native), Spanish (Basic Proficiency)